

# FWA-1012VC

## Universal Network Appliance with Intel® Atom™ Processor C3000 for vE-CPE and SD-WAN

**NEW**



### Features

- Intel® Atom® C3000 System On Chip with Intel® QuickAssist Technology at 10Gbps and Intel® AES-NI and VT-d Support
- Supports SR-IOV on all ports by Intel SOC integrated MAC and Intel i350 Ethernet Controller
- Optional 3G, 4G LTE and WiFi connectivity for deployment flexibility
- Optional IEEE 802.at/af compliant PoE kit to be PSE to support up to two 25.5W PD



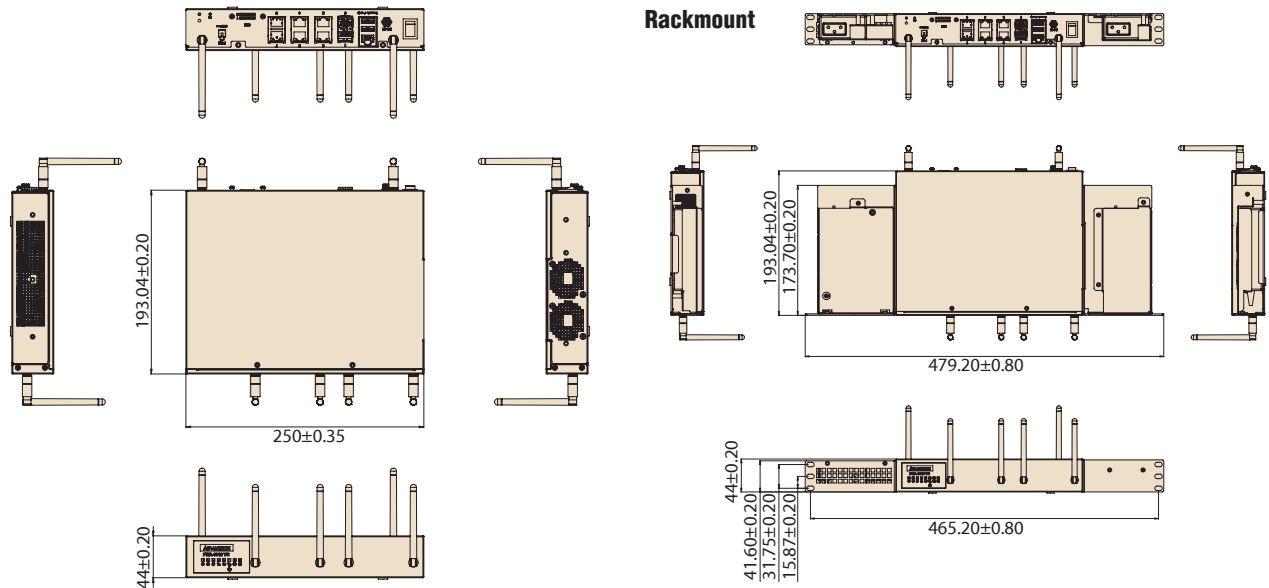
### Specifications

| Form Factor            | Tabletop                                            |                                                                                                                                                                                                                               |                                                                                                                    |                                                                                                                                |
|------------------------|-----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Processor System       | Processor                                           | Intel® Atom™ Processor C3338                                                                                                                                                                                                  | Intel® Atom™ Processor C3558                                                                                       | Intel® Atom™ Processor C3758                                                                                                   |
|                        | Core Number                                         | 2                                                                                                                                                                                                                             | 4                                                                                                                  | 8                                                                                                                              |
|                        | Frequency                                           | 2.2GHz                                                                                                                                                                                                                        | 2.2GHz                                                                                                             | 2.2GHz                                                                                                                         |
|                        | L2 Cache                                            | 2MB/Core Pair                                                                                                                                                                                                                 | 2MB/Core                                                                                                           | 2MB/Core Pair                                                                                                                  |
|                        | BIOS                                                | AMI EFI 64Mbit                                                                                                                                                                                                                |                                                                                                                    |                                                                                                                                |
| Virtualization         |                                                     | VT-x, VT-d                                                                                                                                                                                                                    |                                                                                                                    |                                                                                                                                |
| Memory                 | Technology                                          | DDR4 1866MHz                                                                                                                                                                                                                  | DDR4 2133MHz                                                                                                       | DDR4 2400MHz                                                                                                                   |
|                        | Max. Capacity                                       | 32GB                                                                                                                                                                                                                          | 64GB                                                                                                               |                                                                                                                                |
|                        | Socket                                              | 1 x 288-pin DIMM                                                                                                                                                                                                              | 2 x 288-pin DIMM                                                                                                   |                                                                                                                                |
|                        | ECC Support                                         | ECC or Non-ECC                                                                                                                                                                                                                |                                                                                                                    |                                                                                                                                |
| Networking             | Controller                                          | 1 x Marvell 88E1543                                                                                                                                                                                                           | 1 x Intel i350-AM2<br>1 x Marvell 88E1543                                                                          | 1 x Intel i350-AM4<br>1 x Marvell 88E1543                                                                                      |
|                        | 1GbE                                                | 4 x 10/100/1000BASE-T RJ45 port via Intel® SoC Integrated MAC and Marvell 88E1543PHY                                                                                                                                          | 2 x SFP via Intel i350-AM2<br>4 x 10/100/1000BASE-T RJ45 port via Intel® SoC Integrated MAC and Marvell 88E1543PHY | 2 x SFP and 2x 10/100/1000BASE-T RJ45 via Intel i350-AM4<br>4 x 1GbE RJ45 via Intel® SoC Integrated MAC and Marvell 88E1543PHY |
|                        |                                                     |                                                                                                                                                                                                                               |                                                                                                                    |                                                                                                                                |
| Expansion              | Mini PCIe                                           | 1 x Full-size Mini PCIe for WiFi module with 2 x antenna holes<br>1 x Half-size Mini PCIe for WiFi module with 2 x antenna holes (by project support)                                                                         |                                                                                                                    |                                                                                                                                |
|                        | SIM socket                                          | 2 x Mini SIM                                                                                                                                                                                                                  |                                                                                                                    |                                                                                                                                |
|                        | M.2                                                 | 1 x M.2 3042 B-key support USB, SATAIII or PCIe1 with 2 x SIM holders for 3G/4G module with 2 x antenna holes<br>1 x M.2 3042/2260/2280 B-key support USB, SATAIII or PCIe1<br>*each M.2 with 1 SIM holder by project support |                                                                                                                    |                                                                                                                                |
| Storage                | 2.5" HDD/SSD                                        | Optional 2.5" SATAIII SSD bracket (Max 9.5mm height)                                                                                                                                                                          |                                                                                                                    | 1 x 2.5" SATAIII HDD/SSD bracket (Max 9.5mm height)                                                                            |
| I/O                    | Console port                                        | 1                                                                                                                                                                                                                             |                                                                                                                    |                                                                                                                                |
|                        | USB3.0                                              | 2 x USB3.0 Type A host port                                                                                                                                                                                                   |                                                                                                                    |                                                                                                                                |
|                        | LED Indicator                                       | Power, HDD, LTE, WiFi, SW defined status                                                                                                                                                                                      |                                                                                                                    |                                                                                                                                |
|                        | Others                                              | 1 x Power Switch<br>1 x Software definable button with LED indicator                                                                                                                                                          |                                                                                                                    |                                                                                                                                |
| TPM                    |                                                     | Optional 1.2/2.0 support by TPM module                                                                                                                                                                                        |                                                                                                                    |                                                                                                                                |
| Power                  | Power Type                                          | External adaptor                                                                                                                                                                                                              |                                                                                                                    |                                                                                                                                |
|                        | Watts                                               | 36W                                                                                                                                                                                                                           | 60W                                                                                                                |                                                                                                                                |
|                        | Input                                               | 100 V ~ 240 V                                                                                                                                                                                                                 |                                                                                                                    |                                                                                                                                |
|                        | Connector                                           | DC Jack                                                                                                                                                                                                                       |                                                                                                                    |                                                                                                                                |
|                        | Power Adaptor                                       | 12V 5A                                                                                                                                                                                                                        |                                                                                                                    |                                                                                                                                |
| Environment            | Operating Temperature (air flow 0.7 m/sec)          | 0 ~ 40 °C (32 ~ 104 °F)                                                                                                                                                                                                       |                                                                                                                    |                                                                                                                                |
|                        | Non-operating Temperature                           | -20 ~ 80 °C (-4 ~ 167 °F) and 40 °C @ 95% RH Non-Condensing                                                                                                                                                                   |                                                                                                                    |                                                                                                                                |
| Cooling                |                                                     | 1 x system fan with smart fan                                                                                                                                                                                                 |                                                                                                                    | 2 x system fans with smart fan                                                                                                 |
| Mechanical             | Construction                                        | Iron                                                                                                                                                                                                                          |                                                                                                                    |                                                                                                                                |
|                        | Mounting                                            | Support rack -mounting option                                                                                                                                                                                                 |                                                                                                                    |                                                                                                                                |
|                        | Dimensions (W x H x D)                              | 250 x 44 x 193.04 mm (9.8" x 1.7" x 7.5")                                                                                                                                                                                     |                                                                                                                    |                                                                                                                                |
|                        | Weight                                              | 2.3 Kg (4.8lb)                                                                                                                                                                                                                |                                                                                                                    | 2.4 Kg (5.0lb)                                                                                                                 |
| OS support             |                                                     | Linux (CentOS, Red Hat, Ubuntu)                                                                                                                                                                                               |                                                                                                                    |                                                                                                                                |
| Advantech S/W Packages | QuickStart Linux Image (CentOS based reference BSP) | afu, Imensors, flashrom, WiFi drivers, QMI Wireless, Intel® DPDK, Intel® QAT, DUI (Offline Diagnostics)                                                                                                                       |                                                                                                                    |                                                                                                                                |
|                        | Individual Package                                  | DUI (Offline Diagnostics)                                                                                                                                                                                                     |                                                                                                                    |                                                                                                                                |
| Certification          |                                                     | CE/FCC Class B, CCC CB, UL, FCC ID, CE-RED                                                                                                                                                                                    |                                                                                                                    |                                                                                                                                |

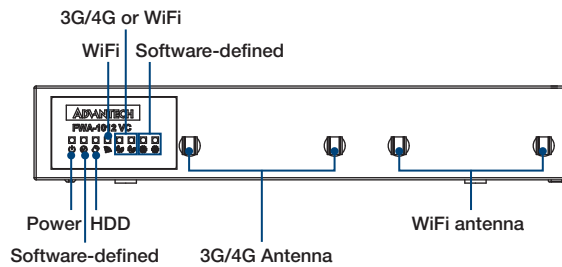
Note1: Other processor can be supported by request

## Dimensions

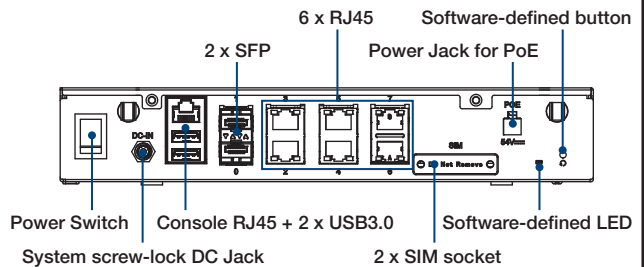
Unit: mm



### Front Panel External I/O Mechanical Layout/Drawing



### Rear Panel External I/O Mechanical Layout/Drawing



## Ordering Information

| Part no.          | CPU         | DDR4 | GbE RJ45 | SFP | USB 3.0 | Console RJ45 | 2.5" HDD Bracker | M.2 3042/2260/2280 B-Key | M.2 3042 B-key | Full Size Mini-PCIe | WiFi Module | LTE module | POE board | Power adaptor |
|-------------------|-------------|------|----------|-----|---------|--------------|------------------|--------------------------|----------------|---------------------|-------------|------------|-----------|---------------|
| FWA-1012VC-2CA1S  | C3338 2core | 1    | 4        | NA  | 2       | 1            | NA               | 1                        | 1              | 1                   | NA          | NA         | NA        | 36W           |
| FWA-1012VC-4CA1S  | C3558 4core | 2    | 4        | 2   | 2       | 1            | NA               | 1                        | 1              | 1                   | NA          | NA         | NA        | 60W           |
| FWA-1012VCR-4CA1S | C3558 4core | 2    | 4        | 2   | 2       | 1            | NA               | 1                        | 1              | 1                   | 1           | 1          | NA        | 60W           |
| FWA-1012VC-8CA1S  | C3758 8core | 2    | 6        | 2   | 2       | 1            | 1                | 1                        | 1              | 1                   | NA          | NA         | NA        | 60W           |
| FWA-1012VCR-8CA1S | C3758 8core | 2    | 6        | 2   | 2       | 1            | NA               | 1                        | 1              | 1                   | 1           | 1          | NA        | 60W           |
| FWA-1012VCP-8CA1S | C3758 8core | 2    | 6        | 2   | 2       | 1            | NA               | 1                        | 1              | 1                   | NA          | NA         | 1         | 60W           |

## Optional Accessories

| Part Number Description | Description                                                | Supporting SKU                                                                  |
|-------------------------|------------------------------------------------------------|---------------------------------------------------------------------------------|
| 1700018950              | Console cable                                              | For all SKUs                                                                    |
| 989232600E              | TPM1.2 Module                                              | For all SKUs                                                                    |
| 989232600E              | TPM2.0 Module                                              | For all SKUs                                                                    |
| FWA-1012VC-WLAN         | WiFi module kit (Series PCE4302AN/Antenna/SMA cable/Screw) | For FWA-1012VC-4CA1S / FWA-1012VC-8CA1S                                         |
| FWA-1012VC-WWAN         | LTE module kit (Series EM7455/Antenna/SMA cable/Screw)     | For FWA-1012VC-4CA1S / FWA-1012VC-8CA1S                                         |
| FWA-1012VC-RMK          | Rack mount kit (60W)                                       | For FWA-1012VC-4CA1S / FWA-1012VC-8CA1S / FWA-1012VCR-4CA1S / FWA-1012VCR-8CA1S |
| FWA-1012VC-RMK1         | Rack mount kit w/ PoE cover                                | For FWA-1012VC-8CA1S                                                            |
| FWA-1012VC-RMK2         | Rack mount kit (36W)                                       | For FWA-1012VC-2CA1S                                                            |
| FWA-1012VC-POE          | PoE module kit (with 54V adapter)                          | For FWA-1012VC-2CA1S / FWA-1012VC-4CA1S / FWA-1012VCR-4CA1S / FWA-1012VCR-8CA1S |
| FWA-1012VC-HDD          | 2.5" HDD kit                                               | For FWA-1012VC-2CA1S / FWA-1012VC-4CA1S / FWA-1012VCR-4CA1S / FWA-1012VCR-8CA1S |
| 1702002600              | Power cord 3P 180 cm, USA                                  | For FWA-1012VC-4CA1S / FWA-1012VC-8CA1S / FWA-1012VCR-4CA1S / FWA-1012VCR-8CA1S |
| 1702002605              | Power cord 3P 180 cm, Europe                               | For FWA-1012VC-4CA1S / FWA-1012VC-8CA1S / FWA-1012VCR-4CA1S / FWA-1012VCR-8CA1S |
| 1702031801              | Power cord 3P 180 cm, UK                                   | For FWA-1012VC-4CA1S / FWA-1012VC-8CA1S / FWA-1012VCR-4CA1S / FWA-1012VCR-8CA1S |
| 1700000237              | Power cord 3P 180 cm, JP                                   | For FWA-1012VC-4CA1S / FWA-1012VC-8CA1S / FWA-1012VCR-4CA1S / FWA-1012VCR-8CA1S |

| Part Number Description | Description                  | Supporting SKU                                                                  |
|-------------------------|------------------------------|---------------------------------------------------------------------------------|
| 1700009652              | Power cord 3P 180 cm, China  | For FWA-1012VC-4CA1S / FWA-1012VC-8CA1S / FWA-1012VCR-4CA1S / FWA-1012VCR-8CA1S |
| 1700025855-01           | Power cord 3P 180 cm, India  | For FWA-1012VC-4CA1S / FWA-1012VC-8CA1S / FWA-1012VCR-4CA1S / FWA-1012VCR-8CA1S |
| 1700025112-01           | Power cord 3P 180 cm, Brazil | For FWA-1012VC-4CA1S / FWA-1012VC-8CA1S / FWA-1012VCR-4CA1S / FWA-1012VCR-8CA1S |
| 1700022938-01           | Power cord 3P 300 cm, Korea  | For FWA-1012VC-4CA1S / FWA-1012VC-8CA1S / FWA-1012VCR-4CA1S / FWA-1012VCR-8CA1S |
| 1700001524              | Power cord 3P 180 cm, USA    | For FWA-1012VC-2CA1S                                                            |
| 1700018744              | Power cord 3P 180 cm, Europe | For FWA-1012VC-2CA1S                                                            |
| 1700025803-01           | Power cord 3P 180 cm, UK     | For FWA-1012VC-2CA1S                                                            |
| 1700008921              | Power cord 3P 180 cm, JP     | For FWA-1012VC-2CA1S                                                            |
| 1700025113-01           | Power cord 3P 180 cm, China  | For FWA-1012VC-2CA1S                                                            |
| 1700022814-01           | Power cord 3P 180 cm, Brazil | For FWA-1012VC-2CA1S                                                            |
| 1700018409              | Power cord 3P 300 cm, Korea  | For FWA-1012VC-2CA1S                                                            |

## Packing List

| Part Number    | Description                                   |
|----------------|-----------------------------------------------|
| 96PSA-A60W12W6 | ADP A/D 100-240V 60W 12V C14 LOCKABLE DC PLUG |

# Mouser Electronics

Authorized Distributor

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