Key Features

✓ Successfully pass the free certification exam at IW Academy and become an Infinet Certified Engineer.

To the certification exam

Quanta 5 / Quanta 6 is a wireless point-to-point solution with an impressive maximal performance of up to 650 Mbps, a packet perfomance is up to 1 200 000 pps. **Quanta 5 / Quanta 6** are based on the newest Infinet Wireless proprietary Octopus SDR hardware platform.

Quanta 5 operates in frequency range from 4900 MHz to 6000 MHz, **Quanta 6** - from 6000 MHz to 6425 MHz. The solution supports the wide range of channel width between 3.5 MHz and 56 MHz. SC-FDE radio technology is used for data transmission.

Radio

- Extended set of modulation coding schemes – Quanta 5 / Quanta 6 supports 14 modulation-coding schemes. In periodic interference conditions, the performance will stay on the highest level.
- Automatic Modulation Control (AMC) – modulation control algorithm selects the most appropriate modulation-coding scheme at each polarization and each end of the link in order to maximize the link performance.
- Hybrid-FDD (split-frequency mode) – separate allocation of downlink and uplink channels to utilize the least congested frequency channel at each end of the link.
- Automatic Repeat Request (ARQ) – a technology which enables packet re-transmission in case of previous unsuccessful delivery, allows to achieve reliable connectivity even in highly congested spectrum.
- Instant DFS (only for Quanta 5 family) – a set of algorithms operating on top of the mandatory DFS/Radar detection/LBT, providing background spectrum scanning and zero-downtime channel reselection in case of congestion or radar detection. For uplink and downlink traffic, different frequencies can be selected to achieve optimum performance.
- Automatic Transmit Power Control (ATPC) – a technology which allows to limit the overall power system mode, which takes into account the antenna gain and losses in the RF cable.

Networking

- VLAN support is an important tool which is used to isolate and filter traffic flows.
- STP support allows to avoid network loops.
- Due to QoS support, traffic prioritization is available in accordance with the 802.1p (8 queues), ensures that the most important data arrives with priority.
- One of the network mechanisms to optimize bandwidth by reducing the share of overhead for service headers are Jumbo frames with size up to 9038 bytes.

Distance

Quanta 5 / Quanta 6 devices have a link budget of up to 178 dB for models with 25 dBi antenna and from 125 dB for models with external antennas that allows to achieve reliable connectivity at a distance more than 200 km in clear line-of-sight conditions, as well as provides sufficient margin for near- and non-LOS deployments at shorter distances. Transmit power at the highest modulations is also one of the key performance metrics, allowing devices to achieve the highest performance over long distances and in noisy spectrum. Quanta 5 / Quanta 6 transmit power at QAM256 is up to 24 dBm.

Environment

- Operating temperature range -40 ... +60 ºC, in an extended temperature range: -55 ... +60 ºC.
- Dust and water protection in compliance with IP66/IP67.
- Wind load up to 160 kph - operation, 200 kph - survival.
- Build-in lightning protection according to the standards:
  - IEC 61000-4-2: +/-4kV (contact discharge), +/-8kV (air discharge);
  - IEC 61000-4-4: +/-0.5kV
  - IEC 61000-4-5: +/-1kV (line-to-ground), +/-0.5kV (line-to-line);

Power

The device has following electrical parameters:

- Consumption is up to 15 W.
- Power options: 90-240 VAC~ @ 50/60 Hz, ±43..56 VDC.
- 802.3at support or InfiNet Wireless proprietary passive PoE.

Title

- AC/DC injector IDU-CPE-G(24W) is included to the packing list.