Horizon II *macro* AC Outdoor

Motorola's Horizon II *macro* AC Outdoor Enclosure enables the flexible deployment of GSM and multi-technology cell-sites in a cost effective platform

The Horizon II *macro* AC Outdoor Enclosure is a robust solution, which houses Motorola's Horizon II *macro* Indoor GSM base station, supporting up to 36 GSM carriers within a single secure enclosure. The enclosure also accommodates up to 3U of communication equipment, which can include Motorola's UMTS HSPA and LTE "zero foot print" solutions.

Remote Radio Heads

Utilizing Motorola's remote radio head unit, the RCTU4, carrier capacity can be expanded further with the addition of up to six additional RF heads, offering the possibility of 36 further carriers depending on the BBU site controller loading. The RCTU4s can also be located to distances over 20km away, via the fast fiber connection to the base station, offering even more flexibility to this versatile base station.

Benefits

Rapid Deployment

Motorola's Horizon II macro AC Outdoor enclosure provides a secure, weatherproof environment for the Horizon II macro Indoor cabinet and customer network equipment. Capitalizing on the small size of the Horizon II macro Indoor means that the enclosure is unobtrusive, while being tough and rugged to allow deployment in roadside or public areas. Connections may be made from either the left or right side, allowing the system to be deployed against a wall or in a corner. Installation, from a prepared site to call processing, is usually less than 60 minutes.

Flexible

The Horizon II macro DC Outdoor enclosure can be interconnected to create a 24-carrier GSM site. Furthermore it can also readily support the deployment of UMTS/HSPA with installation of Motorola's Horizon 3G-n fber solution in the available 3U of customer equipment space. The enclosure provides breaker-protected DC and AC outlets to power these units. This offers speedy 3G deployment with the minimum of network impact.

Practical

The use of the Horizon II macro Indoor platform as the base station component means that the Outdoor enclosure supports the same wide variety of RF configurations; up to 36 GSM carriers. It has an operational range from –40°C to +50°C and is fully IP55 complaint, providing a secure, weatherproof environment in which standard Field Replaceable Units can operate.

Temperature control is achieved using a Direct Air Cooling System (DACS), which results in a low acoustic noise signature, high operating efficiency and low power consumption.

An optional internal battery backup system protects against power outages for approximately 20 minutes (for a fully configured base station).For sites with less dependable power, two more rigorous battery backup options are available; a modified cable shroud offering up to 6 hours of support and a standalone battery cabinet, which can power the site for up to 16 hours.

Specifications

Guidelines

The Site controller configuration provides the total number of carriers available at a site and is dictated by service class, the software load and network elements of the end to end system.

(Numbers shown for Full Rate GMSK under a Horizon 2G RAN Controller)

Additional in-cabinet radio numbers can be provided via daisy chaining of ancillary cabinets under the control of a single "master" base station.

For CTU4 and RCTU4 the maximum RF output powers are stated as MC-BTS Class I and the maximum radio carriers are stated as MC-BTS Class II.

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Horizon II *macro* AC Outdoor

Size: 1500mm (H) x 1050mm (W) x 725mm (D)
Weight: ≤310kg (enclosure only)
Power Supply: 88 to 264VAC
Power Consumption: 2.4kW (typical peak)
Operational Environment: -40°C to 50°C Further operational temperature requirements can be discussed on a market specific basis in line with localized solution approach
Type Approval: Type Approval: ETSI EN 301-502 EMC: ETSI EN 301 489-8 Safety: EN60215, IEC60215, EN60950, IEC60950 EN50385, IEC50385
Environmental Approval: 2002/95/EC Restriction of the use of certain hazardous substances in electrical and electronic equipment 2002/96EC waste electrical and electronic equipment WEEE 94/62/EC Packaging and packaging waste
Maximum Number In-Cabinet Radios: 6

Site Controller Configurations

Maximum Number Site Controllers: 2
Maximum Number Carriers: HIISC2 (CTU2D only): 48 BBU (CTU2D): 48 BBU (R/CTU4): 48 BBU (Total): 72

Radio Configurations

Per CTU2D In-Cabinet Radio

Maximum Number Carriers: 2
Number Sectors: 1
Maximum RF Output Power *EGSM900*: Single Carrier: 63W Double Carrier: 20W Double EDGE: 10W
Maximum RF Output Power *GSM1800*: Single Carrier: 50W Double Carrier: 16W Double EDGE: 8W
Receive Sensitivity: EGSM900: -112.5dBm GSM1800: -113.5dBm

Per CTU4 In-Cabinet Radio

Maximum Number Carriers: 6
Number Sectors: 1
Maximum RF Output Power *EGSM900*: Single Carrier: 40W Multi Carrier: 20W Multi EDGE: 15W Multi E-EDGE: 10W
Maximum RF Output Power *GSM1800*: Single Carrier: 32W Multi Carrier: 16W Multi EDGE: 12W Multi E-EDGE: 8W
Receive Sensitivity: EGSM900: -112.5dBm GSM1800: -113.3dBm

Per RCTU4 Remote Radio Head

Maximum Number Carriers: 6
Number Sectors: 1
Maximum RF Output Power *EGSM900*: Single Carrier: 40W Multi Carrier: 20W Multi EDGE: 15W Multi E-EDGE: 10W
Maximum RF Output Power *GSM1800*: Single Carrier: 32W Multi Carrier: 16W Multi EDGE: 12W Multi E-EDGE: 8W
Receive Sensitivity: EGSM900: -112.8dBm GSM1800: -113.6dBm

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