Multi-Channel, Multi-Band High Power Base Station

Hammerhead

MANAGED ACCESS

BORDER SECURITY

LAW ENFORCEMENT

DISASTER RECOVERY

LTE/UMTS/GSM/CDMA2000

WIRELESS NETWORK MONITORING & SCANNING

FREQUENCY AGNOSTIC – FROM 400MHZ TO 4GHZ

FLEXIBLE CONFIGURATION - UP TO 16 RADIOS

OPERATIONAL FLEXIBILITY

The Hammerhead is a multi-channel, multi-band high power base stations. The system can be configured to support up to 16 base stations transmitting on any combination of up to 6 frequency bands simultaneously. Each frequency band utilizes highly filtered 25 Watts or 100 Watts power amplifiers. The system only requires a single wide-band antenna for operation. This simplifies the integration task and makes it possible for the system to be moved from one vehicle to another.

Each BTS can be configured dynamically and independently on any frequency and radio access technology supported by the base-band radios: GSM/GPRS/EDGE, CDMA2000, 3G or LTE-FDD/TDD. The system offers frequency agility from 400MHz to 4 GHz on each radio. The Hammerhead system includes: power amplification, filtering, cabling, antenna(s) and the multi-radio baseband unit. It is compatible with both portable use cases and vehicular applications, allowing for high operational flexibility in the field. The Hammerhead is offered in versatile configurations, including a rugged portable rack-mount enclosure that houses the 6U rack-mount Transportable Amplification Unit and separate enclosure for one or two 3U half-width Portable Base Station Unit.

Multi-Channel, Multi-Band High Power Base Station

Portable Base Station Unit (PBU)

The PBU is at the core of the Hammerhead series design. It is a multi-channel base station unit that includes up to 8 base stations. Each radio is capable of supporting a 2G, 3G or LTE (FDD and TDD) base station as well as monitoring the surrounding mobile networks. The system is frequency agile and can support all cellular bands from 400MHz to 4 GHz. The PBU can either be used as the radio source for the Transportable Amplification Unit (TAU) when a larger coverage is required or with the lower power Portable Amplification Unit (PAU) for short range operations.

Transportable Amplification Unit (TAU)

The TAU is a high power multi-band radio front end that can amplify the output of one or two PBUs (up to 16 base stations) simultaneously. The TAU supports up to 6 frequency bands (FDD and TDD) simultaneously. The peak output power per band can be 25 Watts or 100 Watts depending on the configuration. The system only requires a single wide-band antenna for cellular operation. All transmit and receive bands are highly filtered and the status of each power amplifier is constantly monitored and reported. The output power of each cell can be inependently controlled via a graphical user interface.

Technical Specifications

Portable Base Station Unit (PBU)

Number of Base Stations:	Up to 8
Supported Air Interface Standards:	2G, CDMA2000, 3G, 4G (TDD & FDD)
Frequency Bands:	All 3GPP bands between 400MHz and 4GHz
Interfaces:	Ethernet, WiFi, GPS, RF + Digital Control Signals, Maintenance
Transmitted output power:	0 dBm (for each base station)
Supply voltage range:	22V to 34V DC (Supplied by TAU)
Typical Power consumption:	80 Watts (8 active base stations)

Transportable Amplification Unit (TAU)

Supported Frequency Bands:	Custom
Number of Frequency bands:	Up to 6
Supported Air Interface Standards:	2G, CDMA2000, 3G, 4G (TDD & FDD)
Peak Output Power:	Up to 100 Watts (per band)
Interfaces:	4 x Ethernet, RF & Digital Control Signals, Maintenance, Scanning Antenna Port, Combined TX/RX antenna port
Supply voltage range:	110/220 VAC
Peak Power consumption:	1700 Watts