

# Quinta CU

Digital Control Unit

Order # 723.924



## FEATURES

- DSSS modulation to ensure high immunity from interference in the frequency range of 2.4 / 5.2 and 5.8 GHz
- HD - High Definition audio mode provides an audio bandwidth of 24 KHz and a sampling rate of 48 KHz
- HQ - High Quality of service mode for a user-optimised transmitting and receiving performance in difficult environments in terms of radio transmission
- AVB (Audio Video Bridging) input and output for digital signal transmission in building networks - compliant to the IEEE 801.1 standards
- True diversity antenna technology ensures highest transmission and reception reliability
- Digital 128-bit encryption and additional 24-bit PIN code protection
- Automatic recognition of interferences in all frequency ranges
- Silent change to an interference-free frequency range - automatic or manual according to the EN 300328 ETSI
- The control unit can manage up to 150 microphone units
- 4 audio up-streams for up to 4 microphone signals
- 2 audio down-streams for loudspeaker transmission and headphone output
- NOM - Number of open Microphones function allows the allocation of up to 4 microphone units simultaneously
- Processor-controlled and automatic audio channel allocation of the microphone units
- Different operating modes:
  - Manual – each participant can turn the microphone on and off;
  - Voice Activation – the microphone is turned on when someone speaks into it;
  - Override – when a microphone unit is activated, the one that was activated before will be turned off;
  - Push-To-Talk – as long as the participant speaks into the microphone, he/she must press the microphone button.
- Integrated DSP for flexible audio routing
- Zoning – the output channel allocation of individual microphone units can be divided into 4 different audio zones analogue or digital via AVB
- With the Mix-Minus function the system can be integrated into tele- and video conferences
- Fully parametrical 4-band equalizer for microphone unit loudspeakers and master output
- NOM attenuation for the master output and individual audio zone outputs
- Analogue audio input for external signals or digital via AVB
- System control and configuration via RS 232, USB or Ethernet; connection to a media control system is possible
- Integrated web server for platform independent system configuration via Smartphone, tablet PC or laptop/PC
- Individual audio channels can be monitored via adjustable headphone connections with a jog/shuttle button on the front
- OLED display for indication of the system state and operation of all parameters
- Connections on the front panel:
  - 1x headphone output via 1/4" jack (6.35mm);
  - 1 x USB Type B
- Connections on the rear panel:
  - 1x bal. audio master output via 3-pin XLR;
  - 1x bal. audio master output via Phoenix terminal strip;
  - 1x unbal. audio master output via RCA;
  - 4x bal. audio zone outputs via Phoenix terminal strip,
  - 1x digital AVB (Audio Video Bridging) via RJ45;
  - 1x bal. audio input via Phoenix terminal strip;
  - 1x RS232 via 9-pin Sub-D;
  - 1x TCP/IP via RJ45;
  - 2x antenna connections N(HF)
- 19" desktop housing, 1 U
- Dimensions (W x H x D) 440 x 44 x 239 mm [17.32" x 1.73" x 9.41"]
- Supplied with two angled rod antennas

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# Quinta CU

## DESCRIPTION

The Quinta CU control unit is used to control about 150 wireless microphone units with loudspeakers. Depending on the settings and selected operating mode up to 4 microphone units can be turned on simultaneously (e.g. 3 delegate and 1 chairman microphone unit). There is a constant status inquiry, monitoring or control due to the data connection to the microphone units. Individual microphone units can be activated via the RS 232 serial interface. The complete discussion system can be switched off via a control command or by pressing the "Stand-by" button on the front. The 4 LEDs on the front indicate the assigned transmission channels of the microphones. For maximum security the control unit can be protected with a PIN code accepting only microphone units that have the correct PIN code. In addition to this, the radio transmission is digitally encrypted.

The Quinta system meets the regulations of the European Telecommunications Standards Institute (ETSI) and can be integrated into existing or new building computer networks that comply IEEE 802.11 standard (AVB). For a safe wireless transmission there are three frequency bands available: 2.4 / 5.2 / 5.8 GHz. The switching of the channels is either automatically or manually. The protection against unauthorised listening is guaranteed by using 128-bit encryption and a 24-bit PIN-code.

The integrated Web server allows configuring the control unit with a Smartphone, tablet PC or PC via USB, LAN, WLAN.

The system can be connected to a media control system via the RS 232 interface. This allows a particularly convenient operation and provides different status indicators e.g. the battery status. Furthermore, the Quinta system can be integrated into tele and video conferences.

## ARCHITECT'S SPECIFICATIONS

The control unit shall be the core of a digital wireless discussion system. The DSSS modulation shall ensure high immunity from interference in the frequency range of 2.4 / 5.2 and 5.8 GHz. The HD- High Definition audio mode shall provide an audio bandwidth of 24 KHz and a sampling rate of 48 KHz. The HQ- High Quality of service mode shall be used for a user-optimised transmitting and receiving performance in difficult environments in terms of radio transmission. The AVB (Audio Video Bridging) input and output for digital signal transmission in building networks shall be compliant to the IEEE 801.1 standards. The true diversity antenna technology shall ensure highest transmission reliability. The digital 128-bit encryption shall include an additional 24-bit PIN code. There shall be an automatic recognition of interferences in all frequency ranges. The silent change to an interference-free frequency range shall be automatic or manual according to the EN 300328 ETSI. The control unit shall manage up to 150 microphone units. There shall be 4 audio up-streams for up to 4 microphone signals. There shall be 2 audio down-streams for loudspeaker transmission and headphone output. The NOM - Number of open Microphones function shall allow the allocation of up to 4 microphone units simultaneously. The audio channel allocation of the microphone units shall be processor-controlled and automatic. The control unit shall feature different operating modes: Manual – each participant can turn the microphone on and off; Voice Activation – the microphone is turned on when someone speaks into it; Override – when a microphone unit is activated, the one that was activated before will be turned off; Push-To-Talk – as long as the participant speaks into the microphone, he/she must press the microphone button. For flexible audio routing there shall be an integrated DSP. Zoning – the output

channel allocation of individual microphone units shall be divided into 4 different audio zones analogue or digital via AVB. With the Mix-Minus function the system shall be integrated into tele and video conferences. The control unit shall feature a fully parametrical 4-band equalizer for microphone unit loudspeakers and master output, a NOM attenuation for the master output and individual audio zone outputs as well as an analogue audio input for external signals or digital via AVB. The system control and configuration shall be done via RS 232, USB or Ethernet. The connection to a media control system shall be possible. An integrated web service shall be available for platform independent system configuration via Smartphone, tablet PC or laptop/PC. The individual audio channels shall be monitored via adjustable headphone connections with a jog/shuttle button on the front. The OLED display shall indicate the state and operation of all parameters. The connection on the front shall be a plug-in type: 1x headphone output via 1/4" jack (6.35mm); 1 x USB Type B. The connection on the rear shall be a plug-in type: 1x bal. audio master output via 3-pin XLR; 1x bal. audio master output via Phoenix terminal strip; 1x unbal. audio master output via RCA; 4x bal. audio zone outputs via Phoenix terminal strip; 1x digital AVB (Audio Video Bridging) via RJ45; 1x bal. audio input via Phoenix terminal strip; 1x RS232 via 9-pin Sub-D; 1x TCP/IP via RJ45; 2x antenna connections N(HF). The dimensions of the 19" desktop housing with 1 U shall be (WxHxD) 440 x 44 x 239 mm [17.32" x 1.73" x 9.41"]. The delivery shall include 2 angled rod antennas.

Manufacturer: beyerdynamic  
Type: Quinta CU

# Quinta CU

## SUPPLIED ACCESSORIES

1 Power cable	
1 USB cable	
6 Phoenix terminal strips, 3-pin	
2 CA Q11 antennas	
1 Unlocking tool	
Quinta Software Control and configuration software	Order # 723.991

## TECHNICAL SPECIFICATIONS

### General

Frequency range	2400 – 2483.5 MHz 5150 – 5250 MHz 5725 – 5875 MHz
Modulation	DSSS (Direct Sequence Spread Spectrum) and QPSK/BPSK (Quadrature/Binary Phase Shift Keying) digital signal processing acc. to own standard
Max. number of audio streams	4 useable channels per system
Signal-to-noise ratio	80 dB typ., (unweighted signal-to-noise ratio)
Range between microphone units and control unit	> 100 m [109.36 yds]
Power supply	100 – 240 V AC 50/60 Hz
Approval	world-wide

### AVB

Transmission and reception of audio data	acc. to IEC 61883-6
Format of the audio data	AM824
Stream ID Quinta CU	Bit 63 – 16 / MAC address Bit 15 – 0 / X

### Quinta CU Control Unit

Frequency response	70 Hz – 22 kHz (-3 dB)
Operation mode	Diversity (receiver), separate for each channel
Antenna connection	2 N-connectors (female)
Transmitting power	max. 20 dBm per channel and region (average, duty cycle $\leq$ 30%)*
Connections	
Serial control port	RS 232, USB
Ethernet port	LAN, TCP/IP standard
Master output balanced	1 x XLR, 1 x 3-pin Phoenix terminal strip, max. +6 dBu, level adjustable via software (range $\pm$ 15 dB)

## OPTIONAL ACCESSORIES

CA Q 13 Planar antenna, 2.4 - 5.8 GHz	Order # 724.408
CA Q 14 Omnidirectional antenna for remote installation	Order # 723.894
CA Q 30 System coaxial cable Ecoflex, sold per metre	Order # 724.440
CA Q 31 System coaxial cable Ecoflex, 10 m	Order # 724.416
CA Q 32 System coaxial cable Ecoflex, 20 m	Order # 724.424

Master output unbalanced	RCA, max. +2.2 dBu, level adjustable via software (range $\pm$ 15 dB)
Audio outputs, single channels	4 x 3-pin Phoenix terminal strip, max. +6 dBu, level adjustable via software (range 0 ... -50 dB)
Input balanced	1 x 3-pin Phoenix terminal strip, max. +6 dBu, input adjustable via software (range 0 ... -50 dB)
Power supply	100 – 240 V AC 50/60 Hz 70 – 150 mA
Fuse	2 x AL 0.5 A (slow blow)
Power consumption	10 VA
Temperature range	+10° – +40 °C [+50 °F – +104 °F (at < 90% humidity)]
Indication	4 channel LEDs (red/white) and Power LED (red/white)
Min. depth of Rack	380 mm
Dimensions (W x H x D)	19", 1HU (440 x 44 x 239 mm) [17.32" x 1.73" x 9.41"]
Weight	3.2 kg [7.05 lbs]
AVB interface:	
MAC address	00:22:BB:00:FF:FF
Stream Suffix	00:00
Stream ID	00:22:BB:00:FF:FF:00:00
Number of channels	4
Audio format	IEC 61883-6/AM824 with 24-bit / 48 kHz
IP configuration	DHCP

\*The transmitter power can differ from this value due to specific regulations in various countries.

# Quinta CU

## DIMENSIONS

