HCS-5100MA/08N
8 CHs Digital Infrared Transmitter

The transmitter is the heart of the HCS-5100 system. HCS-5100MA/08N accepts and modulates up to 8 unbalanced audio signals onto carrier waves which are transmitted to radiators located in the room. It can either be connected to HCS-8300M congress main unit and HCS-4100M/50 congress main unit directly, or be used as a stand-alone system for distributing external audio signals. HCS-5100MA/08N is suitable for either tabletop or 19-inch rack mounting using. Four feet (for tabletop) and two brackets (for rack mounting) are supplied.

Features

- **Compliant to IEC 61603-7 and IEC 60914**
- **Compatible with any other IR simultaneous interpretation system compliant to IEC 61603-7**
- **DQPSK digital modulation/demodulation technology**
- **Capable of distributing a maximum of 8 audio channels**
- **Conference hall privacy; the congress venue itself acts as a barrier to infrared signals escaping and being overheard, as infrared is unable to pass through opaque objects such as walls**
- **Suitable for various kinds (small/medium/large international) of conference halls and outdoor venues**
- **Transmitting in 2~8 MHz frequency band eliminates disturbance from high frequency lighting systems**
- **Each audio channel can be assigned a language name for easy identification**
- **Flexible configuration of channels and channel quality modes:**
  - **Mono, standard quality, maximum 8 channels**
  - **Mono, perfect quality, maximum 4 channels**
  - **Stereo, standard quality, maximum 4 channels**
  - **Stereo, perfect quality, maximum 2 channels**
- **Adjustable sensitivity for each input to enable fine tuning of audio levels**
- **Automatic synchronization to the number of channels in use by the system**
- **“Bypass” mode for distribution of signals from another transmitter allows multiple rooms to be used**
- **Combination mode: two N channel IR transmitters can be combined to form a 2N channel system, at most 16 channels**
- **During adjournment, music mode can be used to feed music to all channels**
- **Independent test facility: self-generates diverse frequencies for system debugging**
- **Built-in infrared emitters in transmitter for audio monitoring in operating room**
- **With DCS interfaces and 6P-DIN connector for connecting to HCS-8300M or HCS-4100M/50 Congress Main Unit directly, moreover, with 8 interpretation output channels for recording**
- **Universal mains power facility allows worldwide use**

Controls and Indicators

- Graphic LCD with back-lighting displays status and menu of the system configuration, supporting multi language menu
- Four buttons for configuration
- Power switch
- Monitor channel select knob
- Monitor volume control knob
- Mini IR radiators

Interconnections

- Ø 3.5 mm jack for stereo monitor earphone
- 2 female XLR connectors for external audio inputs to connect auxiliary balanced audio signals such as music, floor language or emergency audio signal
- 8 audio signal output connectors (RCA sockets) for output DCS multi-channel audio
- 8 audio signal input connectors (RCA sockets) to connect external unbalanced audio input signals
- 6 BNC connectors for output HF signal to radiator. To each connector, up to 30 radiators can be connected
- 1 BNC connector for receiving HF signal from another transmitter
- 6P-DIN connector for connecting to HCS-4385U/50 Interpreter Unit or HCS-8300M/HCS-4100M Congress Main Unit
- DCS interfaces (RJ45 standard sockets) for connecting to HCS-8300M/HCS-4100M Congress Main Unit
- 2 × USB interfaces to upgrade system and to save system parameters.
- Ethernet and RS232 ports for connection to computer
- Emergency signal interface: when the public emergency system is active, alarm signal can be fed to all channels automatically
- Extension interface
- Power supply socket

Technical Specifications

System Specifications

Modulation	DQPSK, according to IEC 61603-7
Modulation frequency	
Carriers 0 to 5	2 to 6 MHz, according to IEC 61603-7
Carriers 6 and 7	up to 8 MHz
Frequency response	20 Hz to 10 kHz (-3dB) at standard quality; 20 Hz to 20 kHz (-3dB) at perfect quality
THD at 1 kHz	<0.05%
Isolation	>80 dB
Dynamic range	>80 dB
Weighted SNR	>80 dBA

Electrical

Unbalanced audio inputs	-12 dBV to +12 dBV nominal
Balanced audio inputs	-6 dBV to +18 dBV nominal
Emergency switch connector	Emergency control input
Headphone output	32 Ohm to 2 kOhm
HF input	Nominal 1 Vpp, minimum 10 mVpp, 75 Ohm
HF output	1 Vpp, 6 V DC, 75 Ohm
Power supply	AC 100 V - 240 V, 50 Hz / 60 Hz
Power consumption	Maximum 55 W

Mechanical

Mounting	Brackets for 19″ rack mounting or fixing to a table top; detachable feet for free-standing use on a table top
Dimensions h x w x d (mm)	99 × 430 × 325
Weight	7.5 kg
Color	White (PANTONE 420 C)

Ordering Information

HCS-5100MA/08N	8 CHs Digital Infrared Transmitter (compatible with HCS-4385U/50 or HCS-4100M/HCS-8300M)

HCS-5100T/35
Multi-Channel Digital Infrared Radiator

Features

- Compliant to IEC 61603-7 and IEC 60914
- Compatible with any other IR simultaneous interpretation system compliant to IEC 61603-7
- Standby indication, working indication, failure indication
- Installation: fixed up by bracket or tripod (various mounting methods supported), 10 radiation angles
- Half-transmitting angle: ±22°
- Emission power: 35 W
- Power consumption: 150 W
- Maximum radiation range: 97 meters
- Synchronization ON/OFF with transmitter
- Automatic gain control
- Temperature control: if temperature is too high, control switches to half-power with LED indication
- Manual half-power switch on the rear, convenient for small conferences
- Delay compensation for differences in cable lengths between transmitter and radiators

The radiator receives carrier signals generated by the transmitter and emits infrared radiation, carrying up to 32 audio distribution channels. Radiators are connected to the HF (BNC) connectors of the IR transmitter. A maximum of 30 daisy chained radiators can be connected to each output.

Controls and Indicators

- Power indicator
- Temperature protection indicator
- Input signal indicator
- Fault indicator
- Output power switch
- Delay compensation indicator
- Delay compensation buttons (-/+)

Interconnections

- HF input and output connectors (2 x BNC) for connection to transmitter and loop-through to other radiators

Technical Specifications

Electrical and optical

Modulation	DQPSK, according to IEC 61603-7
Modulation frequency:	
Carriers 0 to 5	2 to 6 MHz, according to IEC 61603-7
Carriers 6 and 7	Up to 8 MHz
Angle of half intensity	$\pm 22^0$
HF input	Nominal 1 Vpp, minimum 10 mVpp, 50 Ohm
HF output	1 Vpp, 6 V DC, 50 Ohm
Mains voltage	110/220 V, 50 to 60 Hz
Power consumption	150 W
Power consumption (standby)	8 W

Mechanical

Mounting	Suspension bracket for direct ceiling mounting; mounting plates for floor stands; wall mounting bracket HCS-5100TBZJ can be used for fixing radiator to wall surfaces
Dimensions h x w x d (mm)	145 × 500 × 305
Weight	6.5 kg
Front color	Red

Ordering Information

HCS-5100T/35	Multi-channel Digital Infrared Radiator (35 W)

HCS-5100R
Digital Infrared Receivers

HCS-5100R is a series of IR receivers, which can receive up to 32 language channels. Both rechargeable Ni-MH battery and disposable battery can be used. The receiver is equipped with channel selector, volume control, power switch, Ø 3.5 mm stereo earphone jack, and charging circuit on the PCB. A LCD displays channel number with language name, received signal intensity, battery capacity and volume.

Features

- **Compliant to IEC 61603-7 and IEC 60914**
- **Compatible with any other IR simultaneous interpretation system compliant to IEC 61603-7**
- **Independent intellectual property chipset for digital infrared processor, and DQPSK digital modulation/demodulation technology**
- **Transmitting in 2~8 MHz frequency band eliminates disturbance from high frequency lighting systems**
- **Channel selection via up/down button, at most 4,8,16 or 32 channels available**
- **Back-lighting LCD display with channel number, language name, battery and signal status indication**
- **Number of available channels is always the same as the number of channels in use by the system, eliminating the need to scroll through unused channels**
- **Adjustable volume**
- **Unique 270º super wide reception angle, ensuring perfect sound quality even when casually placed**
- **Audio signal automatically muted when signal is too low, ensuring that the user receives only high quality audio**
- **Ergonomically compact and elegant design**
- **Lightweight and handy receiver in conjunction with single earphone (EP-820AS/EP-828/EP-829SW) or headphone (HCS-5100PA /HCS-5100PB) for easy and comfortable use**
- **Can be hung over the neck via a nice strap or fit into the shirt pocket**
- **Freedom of movement within the range of IR power radiator**
- **No limit to the receiver number within the IR power radiation range**
- **Works without errors, even in bright sunlight**
- **Built-in high precision rechargeable circuitry to prolong battery life**
- **Can be used with disposable batteries (2×AA alkaline batteries, not included) or environmentally-friendly Ni-MH rechargeable battery pack (not included)**
- **No power consumption when headphone is disconnected**
- **Measurement mode for easy checking of radiator coverage**
- **Can be equipped with alarm system to prevent loss**
- **Can work with HCS-5300 digital infrared wireless conference system and achieve up to 1+3 channels infrared wireless simultaneous interpretation**

Controls and Indicators

- LCD displays channel number, language name, battery capacity, signal intensity and volume
- Power switch
- Channel selector buttons
- Volume control buttons

Interconnections

- Ø 3.5 mm stereo earphone jack
- Charging contacts

Technical Specifications

System Specifications

Modulation	DQPSK, according to IEC 61603-7
Modulation frequency	
Carriers 0 to 5	2 to 6 MHz, according to IEC 61603-7
Carriers 6 and 7	up to 8 MHz
Frequency response	20 Hz to 10 kHz (-3dB) at standard quality; 20 Hz to 20 kHz (-3dB) at perfect quality
THD at 1 KHz	<0.05%
Isolation	>80 dB
Dynamic range	>80 dB
Weighted SNR	>80 dBA
Input range	-12 dBV ~ +12 dBV (adjustable)

Electrical

IR irradiance level	4 mW/m^2 per carrier
Angle of sensitivity	270º
Headphone output level at 2.4 V	450 mVrms (speech at maximum volume, 32 Ohm headphone)
Headphone output freq. range	20 Hz to 20 kHz
Headphone output impedance	32 Ohm to 2 kOhm
Max. SNR	>80 dBA
Supply voltage	1.8 V to 3.6 V, nominal 2.4 V
Power consumption	
Normal (at 2.4 V)	38 mA (32 Ohm headphone)
Headphone jack unplugged	0 mA
Battery life	
2×AA alkaline cells	70 hours
Rechargeable battery pack	42 hours

Mechanical

Dimensions h x w x d (mm)	155 × 46 × 24
Weight	
Excl. batteries	80 g
Incl. batteries	135 g
Color	Black (PANTONE 419 C) White (PANTONE Cool Gray 1 C)

Ordering Information

HCS-5100R/04	4 CHs Digital Infrared Receiver (LCD, language display, optional rechargeable battery pack or 2xAA alkaline cells, excl. battery, black)
HCS-5100R/08	8 CHs Digital Infrared Receiver (LCD, language display, optional rechargeable battery pack or 2xAA alkaline cells, excl. battery, black)
HCS-5100R/16	16 CHs Digital Infrared Receiver (LCD, language display, optional rechargeable battery pack or 2xAA alkaline cells, excl. battery, black)
HCS-5100R/32	32 CHs Digital Infrared Receiver (LCD, language display, optional rechargeable battery pack or 2xAA alkaline cells, excl. battery, black)
HCS-5100R_W/04	4 CHs Digital Infrared Receiver (LCD, language display, optional rechargeable battery pack or 2xAA alkaline cells, excl. battery, white)
HCS-5100R_W/08	8 CHs Digital Infrared Receiver (LCD, language display, optional rechargeable battery pack or 2xAA alkaline cells, excl. battery, white)
HCS-5100R_W/16	16 CHs Digital Infrared Receiver (LCD, language display, optional rechargeable battery pack or 2xAA alkaline cells, excl. battery, white)
HCS-5100R_W/32	32 CHs Digital Infrared Receiver (LCD, language display, optional rechargeable battery pack or 2xAA alkaline cells, excl. battery, white)