

# Mobile use Coaxial Cable for 3G/HD-SDI

## Applications

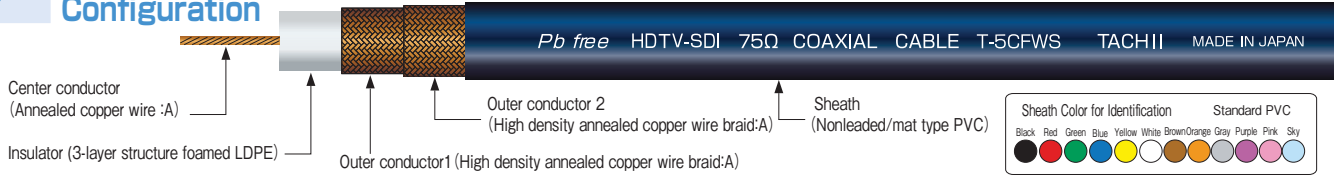
Best choice for broadcasting station/studio etc. and carrying around repeatedly as Coaxial Cable for 3G-SDI/HD-SDI

**Check!!**  
**Technical Support**  
**on Page 2**

## Features

- TACHII's original composite assembly conductor has been employed for central conductor, considering cable management and flex resistance (TCX-5CFWS only).
- TCX-5CFW possible to transmit HD-SDI more than 100m is newly included in our lineup. The central conductor sufficiently keeps the flexibility as whole part of cable, though single wire conductor specification, and the cable management is very good.
- For middle distance transmission, TCX-4CFWS is also available in our lineup, customers can enjoy to choose from wide ranges, including the above TCX-5CFW.
- In order to make handling more easy in mobile use, TACHII has designed to provide more soft and limber cable than ever.
- Considering the sheath material for outdoor use, TACHII has employed nonlead type PVC in view of better abrasion quality.
- Please refer to Technical description on Page 2 and eye pattern wave on Page 9~10 for 3G-SDI/HD-SDI transmission.
- The processed product with both ends BNC Connector harness are on sale. Please refer to Page 37 on the details.

## Configuration



## Construction Properties

Model	Center conductor	Insulator	Outer conductor1 (Braid)		Outer conductor2 (Braid)		Finished cable		Electrical properties			
	Structure Wires/mm	O.D. mm	Structure Spindles/Wires/mm	Density %	Structure Spindles/Wires/mm	Density %	O.D. mm	Approx. weight kg/100m	Conductor resistance Ω/km	Capacitance pF/m	Characteristic impedance Ω	Return loss dB
TCX-3CFWS	7/0.23A	3.1	24/6/0.1A	94	24/7/0.1A	94	5.8	5.0	66.3max.	56	75±3	20.9min.
<b>NEW</b> TCX-4CFWS	7/0.29A	3.95	24/7/0.1A	93	24/7/0.12A	94	6.6	6.2	41.1max.			
<b>NEW</b> TCX-5CFWS	7/0.36A+0.127A×6	4.95	24/7/0.12A	93	24/9/0.12A	96	7.7	8.5	23.9max.			
<b>NEW</b> TCX-5CFW	1/1.10A	4.95	24/7/0.12A	93	24/9/0.12A	96	7.7	8.5	18.5max.	54		

## Nominal Attenuation

※Nominal value means the central figure measured by TACHII.

Model	Nominal attenuation value (dB / 100m)																
	10 MHz	30 MHz	72 MHz	88 MHz	90 MHz	135 MHz	180 MHz	220 MHz	270 MHz	440 MHz	742.5 MHz	770 MHz	1300 MHz	1485 MHz	2000 MHz	2400 MHz	3000 MHz
TCX-3CFWS	4.0	6.4	10.1	11.2	11.3	13.9	16.2	17.9	19.9	25.7	33.8	34.4	45.4	48.8	57.2	63.3	71.7
<b>NEW</b> TCX-4CFWS	3.3	5.1	7.9	8.8	8.9	10.9	12.7	14.1	15.7	20.1	26.7	27.2	36.1	38.7	45.6	50.5	57.3
TCX-5CFWS	2.7	4.3	6.7	7.4	7.5	9.3	10.8	12.0	13.4	17.3	22.9	23.0	31.0	33.4	39.5	43.9	50.2
<b>NEW</b> TCX-5CFW	2.4	3.6	5.6	6.2	6.3	7.8	9.0	10.0	11.2	14.5	19.2	19.6	26.1	28.2	33.2	36.7	41.9

- SD-SDI
- HD-SDI
- 3G-SDI

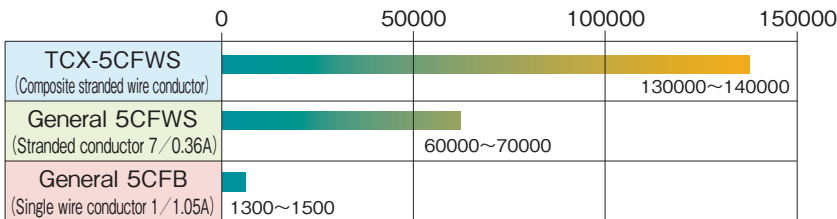
At each SDI signal, the respective color indicates frequency in case of looking transmission distance.

## Bending test

3G/HD-SDI transmission goes the mainstream for mobile use coaxial cable at actual relay/studio fields like coaxial cable for facilities, even in mobile use coaxial cable for carrying around repeatedly.

TACHII has succeeded to greatly improve bending test for TCX-5CFWS comparing with conventional stranded conductor, by employing original composite stranded wire conductor to prevent transmission block arising from conductor disconnection as mobile use coaxial cable. In TCX-3CFWS, TCX-4CFWS, TACHII has also employed conventional stranded wire conductor, therefore the flex resistance outperform by wide margin, comparing with single wire conductor, as well as nearly equal flexibility for microphone cable, and in cable management.

Cable life example in bending test by center conductor wise



<Bending conditions> Cable length: 10.0m  
 Bending position: Fix rotating board center at the position 60cm away from cable edge  
 Bending radius: 46mm (Cable O.D. 7.7mm × 6 times)  
 Bending angle: Right/Left 90° respectively (180° in total) (Count as one time by back-and-forth)  
 Load: Cable own weight only about 750mm from swing stopper

