

# ABA Industry, Inc.

## Specification for Approval

### Product Part Number

- TUP2404N70XX

### Product Description

- U/UTP, 23AWG solid bare copper, CAT.6, CMP
- With rip cord

### Product Features

- High performance of transmission.
- High quality of safety property.
- Sweep frequency up to 550 MHz.
- Reelex II carton and easy to pull out.
- Carton with one layer corrugated design providing sufficient strength and saving packaging space.

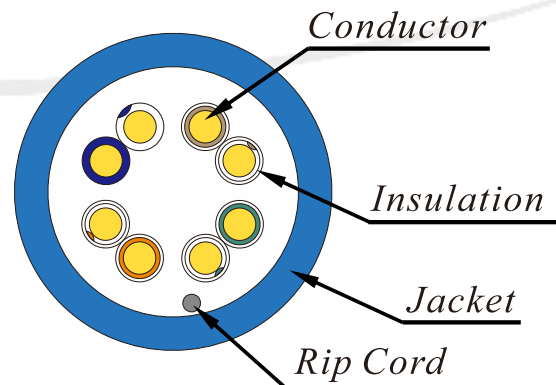
### Application

- Structure cabling for horizontal and building backbone cable.
- Transmission of digital and analogue for data, video and audio applications.
- IEEE 802.3ab 1000BASE-T, 1000BASE-TX and legacy speeds.
- CDDI / ATM / Token Ring
- IEEE 802.3af (PoE) / IEEE 802.3at (PoE+)

### Applicable Standard

- Electrical Transmission
  - ANSI/TIA-568-C.2 (2009)
  - ISO/IEC 11801 (Edition 2.2)
  - IEC 61156-5 (Edition 2.1)
- Flame Test
  - NFPA 262 (CMP)
- Material and Construction
  - UL 444
  - CSA 22.2 NO.214
- EU Directive 2011/65/EC (RoHS2)
- EU Directive 2006/95/EC (LVD)
- CE compliance date: 2010.01.01

### Sectional Drawing



Establish Date	2014.03.01	Edition	1.3	Revised Date	
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### Material and Construction

Conductor	Material	23AWG solid bare copper		
Insulation	Material of single layer	Fluorinated Ethylene Propylene (FEP)		
	Color code & diameter	Blue & white/blue Stripe	0.98 ± 0.02 mm	
	Material of dual layer	Polyolefin (PO)		
		Fluorinated Ethylene Propylene (FEP)		
	Color code & diameter	Orange & white/orange stripe	0.96 ± 0.02 mm	
		Green & white/green stripe	1.00 ± 0.02 mm	
Brown & white/brown stripe		0.95 ± 0.02 mm		
Twisted	Description	Left hand direction		
Assembly	Description	Left hand direction		
Rip cord	Material	Polyester multi-yarn		
Jacket	Material	Low smoke flame retardant polyvinyl chloride (LSFRPVC)		
	Diameter	5.1 ± 0.2 mm		
	Thickness	0.38 ± 0.03 mm		
	Color	Per customer`s request		
Marking	ELITE 1000X CAT 6 GIGASYSTEM TESTED TO 550MHZ---E142890 UTP 4PR 23AWG 75°C C(UL)US CMP(PCC-FT6)---ETL VERIFIED TO TIA-568-C.2 mmyy <sup>1</sup> RoHS COMPLIANT XXXXFT Note 1: mmyy is date code.			

### Usage & Environmental Condition

Temperature range	Storage & shipping	-20°C to 75°C
	Installation	0°C to 60°C
	Operation	-20°C to 60°C
Minimum bending radius	≥ 4 times of overall diameter	
Maximum pulling tension	≤ 110 N	

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### Physical & Electrical Characteristics (at 20°C)

Temperature & voltage rating	75°C / 300V
Spark test	2.5 KV DC
AC leakage current through overall jacket	≤ 10mA (1.5KV AC)
Cable cold bend	-20°C for 4 hr
Conductor DC resistance	≤ 9.38 Ω/100m
Resistance unbalance	≤ 5%
Dielectric strength	1.5 KV ac for 2 s
Insulation resistance	≥ 5000 MΩ · m
Mutual capacitance	≤ 5.6 nF/100m
Capacitance unbalance pair-to-ground	≤ 330 pF/100m

### Transmission Performance (at 20°C)

Frequency (MHz)	IL	NEXT	PS.NEXT	ACR	PS.ACR	ACRF	PS.ACRF	RL	Propagation Delay	Delay Skew
	Max. dB/100m	Min. dB/100m	Min. dB/100m	Min. dB/100m	Min. dB/100m	Min. dB/100m	Min. dB/100m	Min. dB/100m	Max. ns/100m	Max. ns/100m
1	2.03	74.30	72.30	72.28	70.28	67.80	64.80	20.00	570.00	45.00
4	3.78	65.27	63.27	61.49	59.49	55.76	52.76	23.01	552.00	
8	5.32	60.75	58.75	55.43	53.43	49.74	46.74	24.52	546.73	
10	5.95	59.30	57.30	53.35	51.35	47.80	44.80	25.00	545.38	
16	7.55	56.24	54.24	48.68	46.68	43.72	40.72	25.00	543.00	
20	8.47	54.78	52.78	46.31	44.31	41.78	38.78	25.00	542.05	
25	9.51	53.33	51.33	43.83	41.83	39.84	36.84	24.32	541.20	
31.25	10.67	51.88	49.88	41.20	39.20	37.90	34.90	23.64	540.44	
62.5	15.38	47.36	45.36	31.98	29.98	31.88	28.88	21.54	538.55	
100	19.80	44.30	42.30	24.50	22.50	27.80	24.80	20.11	537.60	
150	24.71	41.66	39.66	16.95	14.95	24.28	21.28	18.87	536.94	
200	28.98	39.78	37.78	10.80	8.80	21.78	18.78	18.00	536.55	
250	32.85	38.33	36.33	5.48	3.48	19.84	16.84	17.32	536.28	
300	36.43	37.14	35.14	0.72	N.A.	18.26	15.26	16.77	536.08	
350	39.79	36.14	34.14	N.A.	N.A.	16.92	13.92	16.30	535.92	
400	42.97	35.27	33.27	N.A.	N.A.	15.76	12.76	15.89	535.80	
450	46.01	34.50	32.50	N.A.	N.A.	14.74	11.74	15.53	535.70	
500	48.94	33.82	31.82	N.A.	N.A.	13.82	10.82	15.21	535.61	
550	51.76	33.19	31.19	N.A.	N.A.	12.99	9.99	14.92	535.54	

Values above 250MHz are for information only.

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### Shipping Information

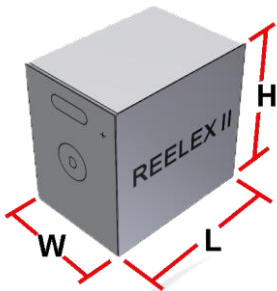
Item	Dimension	Nominal net weight
Cable	305 m	10.65 kg (23.47 lb)
Reelex II Carton	L370 x W260 x H350 mm	950 g
Pallet	1150 x1100 x120 mm	14.1 kg

Container type	Capacity of pallet	Pallet of carton	Capacity of carton
20 feet	20	36/24	600
40 feet	40	36/24	1200

Shipping could use standard delivery form or per customer`s request.

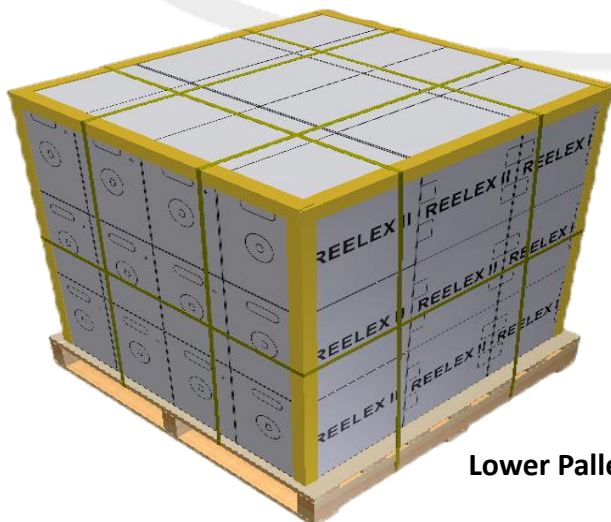
### Schematic Drawing of Carton

One layer corrugated Reelex II carton.

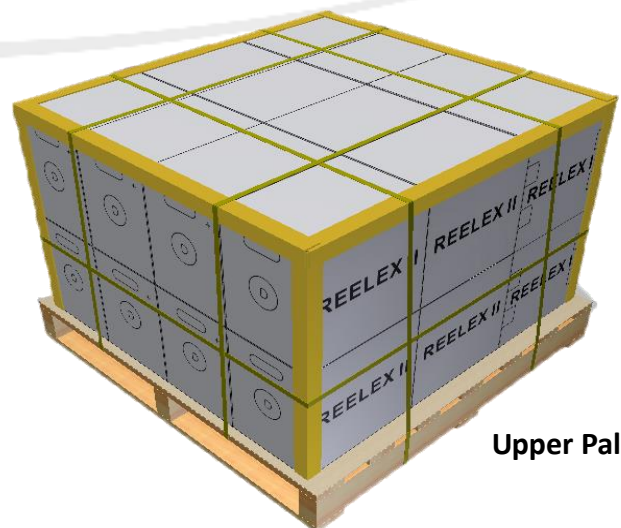


### Schematic Drawing of Package

Each package of pallet delivered with plastic wrap, packing strap and paper corner protector.



Lower Pallet



Upper Pallet

MAKER : *H. C. KUO*

CONFIRM : *Niel Liao*

APPROVAL : *W. J. Wang*